

## PATENT COOPERATION TREATY

## PCT

## INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference <b>C. DEMETRESCU 11-</b>	<b>FOR FURTHER ACTION</b> see Notification of Transmittal of International Search Report (Form PCT/ISA/220) as well as, where applicable, item 5 below.	
International application No. <b>PCT/GB 00/ 01185</b>	International filing date (day/month/year) <b>28/03/2000</b>	(Earliest) Priority Date (day/month/year) <b>09/06/1999</b>
Applicant <b>LUCENT TECHNOLOGIES INC</b>		

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International Search Report consists of a total of 3 sheets.

☒ It is also accompanied by a copy of each prior art document cited in this report.

## 1. Basis of the report

- a. With regard to the **language**, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ the international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

- b. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international search was carried out on the basis of the sequence listing :

☐ contained in the international application in written form.

☐ filed together with the international application in computer readable form.

☐ furnished subsequently to this Authority in written form.

☐ furnished subsequently to this Authority in computer readable form.

☐ the statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.

☐ the statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished

2. ☐ **Certain claims were found unsearchable** (See Box I).

3. ☐ **Unity of invention is lacking** (see Box II).

4. With regard to the **title**,

☒ the text is approved as submitted by the applicant.

☐ the text has been established by this Authority to read as follows:

5. With regard to the **abstract**,

☒ the text is approved as submitted by the applicant.

☐ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box III. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. The figure of the **drawings** to be published with the abstract is Figure No.

☒ as suggested by the applicant.

☐ because the applicant failed to suggest a figure.

☐ because this figure better characterizes the invention.

8

☐ None of the figures.

## INTERNATIONAL SEARCH REPORT

International Application No

PCT 00/01185

**A. CLASSIFICATION OF SUBJECT MATTER**  
IPC 7 H04L1/00

According to International Patent Classification (IPC) or to both national classification and IPC

**B. FIELDS SEARCHED**

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 H04L

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ, COMPENDEX, INSPEC, IBM-TDB

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 97 37466 A (NOKIA TELECOMMUNICATIONS OY ;TIKKA MAURI (FI); OLKKONEN MIKKO (FI)) 9 October 1997 (1997-10-09) page 5, line 10 -page 8, last line figures 6,7 ---	1-8, 10, 14, 17, 20, 21, 24
X	EP 0 790 739 A (TOKYO SHIBAURA ELECTRIC CO) 20 August 1997 (1997-08-20) column 9, line 52 -column 10, line 2 figure 8 ---	1
A	WO 97 14225 A (ERICSSON GE MOBILE INC) 17 April 1997 (1997-04-17)  abstract --- -/--	9, 11-13, 17-19, 22, 23

☒ Further documents are listed in the continuation of box C.☒ Patent family members are listed in annex.

## \* Special categories of cited documents :

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier document but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

"&amp;" document member of the same patent family

Date of the actual completion of the international search

3 July 2000

Date of mailing of the international search report

11/07/2000

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2  
NL - 2280 HV Rijswijk  
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,  
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Authorized officer

Ghigliotti, L

## INTERNATIONAL SEARCH REPORT

International Application No

PCT 00/01185

## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	<p>DATABASE INSPEC 'Online! INSTITUTE OF ELECTRICAL ENGINEERS, STEVENAGE, GB; Inspec No. Trans. Inst. Electron. Commun. Eng. Jpn. B, March 1983 (1983-03) YASUDA Y ; KASHIKI K ; HIRATA Y: "Bit stealing scheme for soft decision Viterbi decoding system" XP002120882 abstract</p> <p>-----</p>	<p>17, 18, 23, 24</p>

# INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/JP98/00/01185

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO 9737466 A	09-10-1997	FI 961442 A	30-09-1997
		AU 2029997 A	22-10-1997
		CA 2250037 A	09-10-1997
		CN 1217117 A	19-05-1999
		EP 0894383 A	03-02-1999
EP 0790739 A	20-08-1997	JP 2868981 B	10-03-1999
		JP 7087443 A	31-03-1995
		JP 7130102 A	19-05-1995
		EP 0790743 A	20-08-1997
		DE 69408237 D	05-03-1998
		DE 69408237 T	27-08-1998
		DE 69414275 D	03-12-1998
		DE 69414275 T	06-05-1999
		EP 0644692 A	22-03-1995
		KR 186063 B	15-04-1999
		US 5715356 A	03-02-1998
WO 9714225 A	17-04-1997	US 5691992 A	25-11-1997
		AU 708484 B	05-08-1999
		AU 7717696 A	30-04-1997
		CA 2233289 A	17-04-1997
		CN 1203707 A	30-12-1998
		EP 0855108 A	29-07-1998
		JP 11513850 T	24-11-1999

PCT

REC'D 07 SEP 2001

WIPO PCT

## INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference C.DEMETRESCU 11-5-5	<b>FOR FURTHER ACTION</b> See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/GB00/01185	International filing date (day/month/year) 28/03/2000	Priority date (day/month/year) 09/06/1999
International Patent Classification (IPC) or national classification and IPC H04L1/00		
Applicant LUCENT TECHNOLOGIES INC		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.


2. This REPORT consists of a total of 5 sheets, including this cover sheet.

- ☒ This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of 4 sheets.

3. This report contains indications relating to the following items:

- I ☒ Basis of the report
- II ☐ Priority
- III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV ☐ Lack of unity of invention
- V ☒ Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☐ Certain documents cited
- VII ☒ Certain defects in the international application
- VIII ☒ Certain observations on the international application

Date of submission of the demand  25/09/2000	Date of completion of this report  04.09.2001
Name and mailing address of the international preliminary examining authority:   European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465	Authorized officer  Snell, T  Telephone No. +49 89 2399 8802



# INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No. PCT/GB00/01185

## I. Basis of the report

1. With regard to the **elements** of the international application (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17)*):

### Description, pages:

1,3-36	as originally filed			
2,2a	as received on	30/07/2001	with letter of	26/07/2001

### Claims, No.:

1-23	as received on	30/07/2001	with letter of	26/07/2001
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### Drawings, sheets:

1/23-23/23	as originally filed
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2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT**

International application No. PCT/GB00/01185

- ☐ the description,      pages:  
☐ the claims,      Nos.:  
☐ the drawings,      sheets:

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)):

*(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)*

6. Additional observations, if necessary:

**V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

**1. Statement**

Novelty (N)	Yes:	Claims	1-23
	No:	Claims	
Inventive step (IS)	Yes:	Claims	
	No:	Claims	1-23
Industrial applicability (IA)	Yes:	Claims	1-23
	No:	Claims	

- 2. Citations and explanations**  
**see separate sheet**

**VII. Certain defects in the international application**

The following defects in the form or contents of the international application have been noted:  
**see separate sheet**

**VIII. Certain observations on the international application**

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:  
**see separate sheet**

**Cited Documents**

- D1: WO 97 37466 A (NOKIA TELECOMMUNICATIONS OY ;TIKKA MAURI (FI);  
OLKKONEN MIKKO (FI)) 9 October 1997 (1997-10-09)  
D2: EP-A-0 790 739 (TOKYO SHIBAURA ELECTRIC CO) 20 August 1997 (1997-08-  
20)  
D3: WO 97 14225 A (ERICSSON GE MOBILE INC) 17 April 1997 (1997-04-17)  
D4: DATABASE INSPEC [Online] INSTITUTE OF ELECTRICAL ENGINEERS,  
STEVENAGE, GB; Inspec No. Trans. Inst. Electron. Commun. Eng. Jpn. B, March  
1983 (1983-03) YASUDA Y ; KASHIKI K ; HIRATA Y: 'Bit stealing scheme for soft  
decision Viterbi decoding system' XP002120882

**Re Item V**

**Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step  
or industrial applicability; citations and explanations supporting such statement**

1. In accordance with the features of claim 1, D1 discloses:

A method of encoding speech packets into blocks ("network packet", see page 8, lines 30-32) in a packet switched network (page 1, line 3), each speech packet including a speech header and a payload comprised of a speech frame, wherein at least two speech frames are encoded into a single block (page 8, lines 30-32 and abstract, lines 2-3).

The subject-matter of claim 1 therefore differs from the disclosure of D1 in that each speech frame includes a set of Class I bits and a set of Class II bits, the method further comprising: encoding a first speech packet by encoding at least a portion of the header and the set of Class I bits; encoding a second speech packet by encoding at least a portion of the header and the set of Class I bits.

However, this difference is not considered to involve an inventive step for the following reasons.

It is well-known in the art to encode speech into frames consisting of a header, Class I bits, and Class II bits, wherein a portion of the header and the Class I bits



are subject to an encoding process and the Class II bits are transmitted uncoded, eg the GSM specification. The characterising part of claim 1 merely defines that two such frames are placed in a single block.

Since D1 discloses the concept of encoding at least two speech frames in a single block, merely by adopting the coding structure of the well-known GSM speech frame the skilled person would arrive in an obvious way at the subject-matter of claim 1.

The subject-matter of claim 1 is therefore does not involve an inventive step (Articles 33(1) and (3) PCT).

2. The additional features of dependent claims 2-23 are in part disclosed in D1, and in part are rendered obvious by the disclosures of documents D1-D4 or are trivial features for a person skilled in the art based on common general knowledge, and thus add nothing of inventive significance to claim 1 (Articles 33(3) PCT).

**Re Item VII**

**Certain defects in the international application**

1. The features of the claims are not provided with reference signs placed in parentheses (Rule 6.2(b) PCT).

**Re Item VIII**

**Certain observations on the international application**

1. Claim 1 is now directed at the embodiment described on pages 18 and 19 in conjunction with figure 13. Since the description describes several other embodiments not falling within the terms of the claims, the description and claims are seriously inconsistent, leading to unclarity in determining the matter for which protection is sought (Article 6 PCT; see PCT Guidelines III-4.3). These further embodiments should either have been deleted from the description and drawings, or it should have been clearly stated that they do not fall within the scope of the invention.

(19) World Intellectual Property Organization  
International Bureau



(43) International Publication Date  
14 December 2000 (14.12.2000)

PCT

(10) International Publication Number  
**WO 00/76111 A1**

(51) International Patent Classification<sup>7</sup>: **H04L 1/00**

Road, London SW19 2EU (GB). SAMARAS, Konstantinos [RO/GB]; 53 Montagu Street, Swindon, Wiltshire SN2 2HL (GB). WU, Jian, Jun [CN/GB]; 32 Marney Road, Swindon, Wiltshire SN5 6AW (GB).

(21) International Application Number: PCT/GB00/01185

(22) International Filing Date: 28 March 2000 (28.03.2000)

(74) Agents: WILLIAMS, David, J. et al.; Lucent Technologies UK Limited, 5 Morningson Road, Woodford Green, Essex IG8 0TU (GB).

(25) Filing Language: English

(26) Publication Language: English

(81) Designated States (*national*): AU, BR, CA, CN, ID, IN, JP, KP, KR, US.

(30) Priority Data:  
99304522.8 9 June 1999 (09.06.1999) EP

(84) Designated States (*regional*): European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE).

(71) Applicant (*for all designated States except US*): LUCENT TECHNOLOGIES INC. [US/US]; 600 Mountain Avenue, Murray Hill, NJ 07974-0636 (US).

Published:

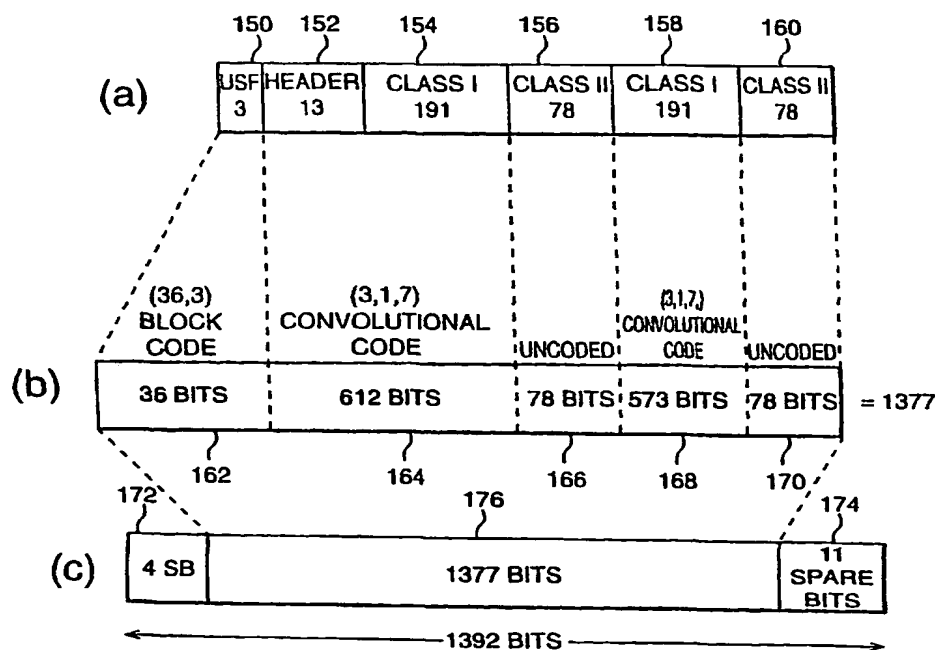
— With international search report.

(72) Inventors; and

(75) Inventors/Applicants (*for US only*): DEMETRESCU, Cristian [RO/GB]; 10 Holmbury Court, 66 Cavendish

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: TRANSMISSION OF VOICE IN PACKET SWITCHED NETWORKS



(57) Abstract: There is disclosed in a packet switched network a method of encoding speech packets into blocks, each speech packet including a speech header and a payload comprised of a speech frame, wherein at least two speech frames are encoded into a single block. Each speech frame may be associated with a different user. An EDGE network utilises such a method.



WO 00/76111 A1

# INTERNATIONAL SEARCH REPORT

International Application No.

PCT/GB00/01185

**A. CLASSIFICATION OF SUBJECT MATTER**  
IPC 7 H04L1/00

According to International Patent Classification (IPC) or to both national classification and IPC

**B. FIELDS SEARCHED**

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 H04L

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ, COMPENDEX, INSPEC, IBM-TDB

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 97 37466 A (NOKIA TELECOMMUNICATIONS OY ;TIKKA MAURI (FI); OLKKONEN MIKKO (FI)) 9 October 1997 (1997-10-09) page 5, line 10 -page 8, last line figures 6,7	1-8, 10, 14, 17, 20, 21, 24
X	EP 0 790 739 A (TOKYO SHIBAURA ELECTRIC CO) 20 August 1997 (1997-08-20) column 9, line 52 -column 10, line 2 figure 8	1
A	WO 97 14225 A (ERICSSON GE MOBILE INC) 17 April 1997 (1997-04-17)  abstract	9, 11-13, 17-19, 22, 23
	-/--	

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

\* Special categories of cited documents :

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier document but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

"&" document member of the same patent family

Date of the actual completion of the international search

3 July 2000

Date of mailing of the international search report

11/07/2000

Name and mailing address of the ISA

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Fax: (+31-70) 340-3016

Authorized officer

Ghigliotti, L

# INTERNATIONAL SEARCH REPORT

Interr. Application No  
PCT/JP00/01185

## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	<p>DATABASE INSPEC 'Online! INSTITUTE OF ELECTRICAL ENGINEERS, STEVENAGE, GB; Inspec No. Trans. Inst. Electron. Commun. Eng. Jpn. B, March 1983 (1983-03) YASUDA Y ; KASHIKI K ; HIRATA Y: "Bit stealing scheme for soft decision Viterbi decoding system" XP002120882 abstract</p> <p style="text-align: center;">-----</p>	<p>17,18, 23,24</p>

# INTERNATIONAL SEARCH REPORT

Information on patent family members

Intern Application No

PCT/US 00/01185

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO 9737466 A	09-10-1997	FI 961442 A	30-09-1997
		AU 2029997 A	22-10-1997
		CA 2250037 A	09-10-1997
		CN 1217117 A	19-05-1999
		EP 0894383 A	03-02-1999
EP 0790739 A	20-08-1997	JP 2868981 B	10-03-1999
		JP 7087443 A	31-03-1995
		JP 7130102 A	19-05-1995
		EP 0790743 A	20-08-1997
		DE 69408237 D	05-03-1998
		DE 69408237 T	27-08-1998
		DE 69414275 D	03-12-1998
		DE 69414275 T	06-05-1999
		EP 0644692 A	22-03-1995
		KR 186063 B	15-04-1999
		US 5715356 A	03-02-1998
WO 9714225 A	17-04-1997	US 5691992 A	25-11-1997
		AU 708484 B	05-08-1999
		AU 7717696 A	30-04-1997
		CA 2233289 A	17-04-1997
		CN 1203707 A	30-12-1998
		EP 0855108 A	29-07-1998
		JP 11513850 T	24-11-1999

# PATENT COOPERATION TREATY

**PCT**

## NOTIFICATION OF ELECTION

(PCT Rule 61.2)

From the INTERNATIONAL BUREAU

To:

Commissioner  
US Department of Commerce  
United States Patent and Trademark  
Office, PCT  
2011 South Clark Place Room  
CP2/5C24  
Arlington, VA 22202  
ETATS-UNIS D'AMERIQUE  
in its capacity as elected Office

Date of mailing:

14 December 2000 (14.12.00)

International application No.:

PCT/GB00/01185

Applicant's or agent's file reference:

C.DEMETRESCU 11-

International filing date:

28 March 2000 (28.03.00)

Priority date:

09 June 1999 (09.06.99)

Applicant:

DEMETRESCU, Cristian et al

1. The designated Office is hereby notified of its election made:



in the demand filed with the International preliminary Examining Authority on:

25 September 2000 (25.09.00)



in a notice effecting later election filed with the International Bureau on:

2. The election ☒ was



was not

made before the expiration of 19 months from the priority date or, where Rule 32 applies, within the time limit under Rule 32.2(b).

The International Bureau of WIPO  
34, chemin des Colombettes  
1211 Geneva 20, Switzerland

Facsimile No.: (41-22) 740.14.35

Authorized officer:

J. Zahra

Telephone No.: (41-22) 338.83.38